(19) World Intellectual Property Organization

International Bureau





(10) International Publication Number

Figueroa Street, Los Angeles, California 90017-2566 (US).

PCT

(43) International Publication Date 20 October 2005 (20.10.2005)

(51) International Patent Classification⁷:

sification⁷: A01N 43/04,

(21) International Application Number:

PCT/US2005/011466

(22) International Filing Date: 5 April 2005 (05.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

C12N 15/00

60/559,990 6 April 2004 (06.04.2004) US

- (71) Applicants (for all designated States except US):
 CEDARS-SINAI MEDICAL CENTER [US/US]; 8700
 Beverly Boulevard, Los Angeles, California 90048 (US).
 CITY OF HOPE [US/US]; 1500 East Duarte Road, Duarte, California 91010 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SHAH, Prediman, K. [IN/US]; 111 North Layton Drive, Los Angeles, California 90025 (US). CHATTERJEE, Saswati [CA/US]; 678 West Alegria Avenue, Sierra Madre, California 91024 (US). WONG, Kamehameha, Kay-Min, Jr [US/US]; 678 West Alegria Avenue, Sierra Madre, California 91024 (US).

WO 2005/097206 A3

(74) Agents: LEVY, Seth, D. et al.; Suite 2400, 865 South

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

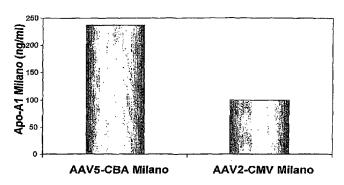
with international search report

YU, ZA, ZM, ZW.

(88) Date of publication of the international search report: 6 April 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PREVENTION AND TREATMENT OF VASCULAR DISEASE WITH RECOMBINANT ADENO-ASSOCIATED VIRUS VECTORS ENCODING APOLIPOPROTEIN A-I AND APOLIPOPROTEIN A-I MILANO



(57) Abstract: Described herein is a gene therapeutic approach to the prevention and treatment of vascular disease and coronary heart disease; in particular, atherosclerosis. The inventive methods may be used in the prevention and treatment of atherosclerosis, as well as any disease or physiological condition in which atherosclerosis plays a role. The inventive methods involve the gene delivery of ApoA-I or ApoA-IMilano. This may be accomplished by the use of rAAV technology. rAAV virions may be delivered to a mammalian subject by various methodologies, including transplantation of transduced bone marrow cells, direct intramuscular injection, intravenous or portal vein injection or stent delivery.

